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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,451	06/27/2001	Brian Arnold	USM1901	4244

26161 7590 06/09/2003

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BOSTON, MA 02110

EXAMINER

NORDMEYER, PATRICIA L

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 06/09/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/869,451	<b>Applicant(s)</b> ARNOLD, BRIAN	
	<b>Examiner</b> Patricia L. Nordmeyer	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-32 and 37-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 33-36 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \*   c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Withdrawn Rejections***

1. The 35 U.S.C. 112 rejections of claims 18 – 21 and 24 of record in Paper #9, Pages 2 – 3, Paragraph #4 are withdrawn due to Applicant's amendments and arguments in Paper #12.
2. The 35 U.S.C. 103 rejections of claims 18 – 23, 29, 30 and 33 over Trask in view of Burgess et al. of record in Paper #9, Pages 3 – 5, Paragraph #6 are withdrawn due to Applicant's amendments and arguments in Paper #12.
3. The 35 U.S.C. 103 rejections of claims 24, 27, 28 and 31 over Trask in view of Burgess et al. and Agger et al. of record in Paper #9, Pages 5 – 6, Paragraph #7 are withdrawn due to Applicant's arguments in Paper #12.
4. The 35 U.S.C. 103 rejections of claims 25 and 26 over Trask in view of Burgess et al. and Jonnes et al. of record in Paper #9, Pages 6 – 7, Paragraph #8 are withdrawn due to Applicant's arguments in Paper #12.
5. The 35 U.S.C. 103 rejection of claim 32 over Trask in view of Burgess et al. and Mobius of record in Paper #9, Pages 7 – 8, Paragraph #8 are withdrawn due to Applicant's arguments in Paper #12.

*New Rejections*

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 18, 21 – 32 and 37 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brehmer et al. (USPN 4,717,496) in view of Möbius (USPN 4,388,768).

Brehmer discloses a stiffening material, or composition, that is deformable at temperatures between 50 and 80 °C (Column 1, lines 57 – 60). The composition is made with a polymeric material, polyepsilon caprolactone (Column 2, lines 25 – 29), having a weight percent of 20 to 70% and filler particles having diameters between 100 to 400 microns, preferably 50 to 500 microns in a weight percent of 30 to 80 % (Column 1, lines 61 – 68). The mixture is applied to woven or non-woven textile fabrics or onto shoe parts (Column 2, lines 64 – 68), and since the polymeric material is deformable between 50 and 80 °C, it would only flow through the inherent openings in the material at ambient temperatures. However, Brehmer et al. fails to disclose the composition between two layers of sheet material, a melt viscosity of the polymeric material at 100 °C is in the range of 900 to 2500 Pascal times a second, a thickness between about 0.4 mm to 2.00mm, the filler being mica or talc, the polymeric material comprising poly(tetramethylene-adipate), one of the layers of sheet material being woven fabric, knitted fabric or apertured non-woven fabric, the composition between two layers of sheet material and an upper, the shoe

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stiffener further comprising a lining material, wherein the adhesive is adhered to the upper on one side and the lining on the other side and the lining material comprising a non-woven textile fiber.

Möbius teaches a knitted, non-woven or cloth, woven, substrate (Column 2, lines 67 – 68) as part of the inner that is porous that allows the resin to flow through it (Column 1, lines 39 – 41 and Column 2, lines 40 – 45) in a shoe stiffener (Column 7, line 56) impregnated with a deformable resin (Column 1, lines 31 – 34) mixed with talc or silica fillers, mica, (Column 3, lines 27 – 28), wherein the liner is attached to an upper to enclose the inner through adhesion (Column 8, lines 1 – 4 and Column 2, lines 36 – 40) giving a thickness of 1.1 mm (Column 7, lines 11 – 12) for the purpose of forming a shoe stiffener that is impregnated with a resin to make it resistant to slipping and sliding (Column 1, lines 49 – 51).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the different substrates, fillers and thickness in Brehmer et al. in order to form a shoe stiffener that is impregnated with a deformable resin and fillers to make it resistant to slipping and sliding as taught by Möbius.

Brehmer et al. discloses the claimed invention except for the polymeric material comprising poly(tetramethyleneadipate). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided poly(tetramethyleneadipate) as a stiffening polymer, since it has been held to be within the general skill of a worker in the art

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to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

One of ordinary skill in the art would have recognized the claimed shoe stiffener would have a melt viscosity of the polymeric material at 100 °C is in the range of 900 to 2500 Pascal times a second or 100 to 10,000 Pascal times a second since Brehmer et al. teaches the adhesive made with the same parameters as the claimed invention. Therefore, one of ordinary skill in the art would have readily determined the optimum melt viscosity depending on the end desired results in the absence of unexpected results.

8. Claims 19, 20, 22 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brehmer et al. (USPN 4,717,496) in view of Möbius (USPN 4,388,768) as applied to claims 18, 21 – 33 and 37 – 41 above; and further in view of Burgess et al. (USPN 5,164,240).

Brehmer et al., as modified with Möbius, discloses a stiffening composition between two layers of material made with a deformable polymeric material mixed with a filler. The layers of material are porous substrates made from knitted material, non-woven material or cloth. However, the modified Brehmer et al. fails to disclose openings having a size range from between 0.15 mm<sup>2</sup> to 5 mm<sup>2</sup> and one of the layers being made from non-woven fabric with apertures.

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Burgess et al. teaches an apertured non-woven fabric layer with openings of 0.1 to 0.3 mm<sup>2</sup> (Column 4, lines 3 – 12) and a resin layer (Column 4, lines 35 – 36) in a shoe stiffener for the purpose of allowing the thermoplastic resin to flow through the fabric and act as a stiffening agent in the composite (Column 2, lines 39 – 44).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the apertures with areas of 0.1 to 0.3 mm<sup>2</sup> in a non-woven fabric in the modified Brehmer et al. in order to allow the thermoplastic resin to flow through the fabric and act as a stiffening agent in the composite.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 18 – 33 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Nordmeyer whose telephone number is (703) 306-5480. The examiner can normally be reached on Mon.-Thurs. from 7:00-4:30 & alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (703) 308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Patricia L. Nordmeyer  
Examiner  
Art Unit 1772

*pln*  
pln  
June 4, 2003

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
*1772*

*6/4/03*